cars on the brain

The Canadian Automotive Sector

A presentation by
Industry Canada
March 2006

Canada

Why Canada has Cars on the Brain...

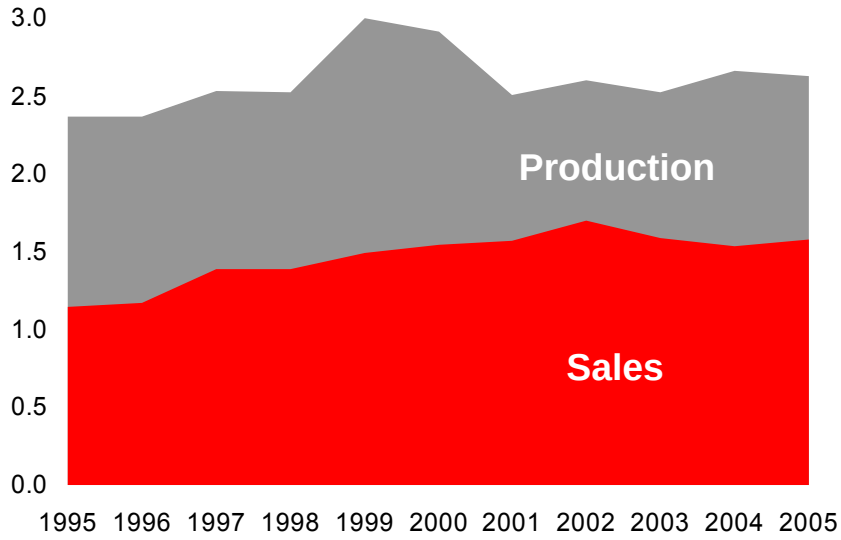
- A Track Record of Success in Automotive
- A Great Business Environment
- A Growing Capacity for Innovation

Canada

A Major Automotive Country

- The auto industry is Canada's largest manufacturing sector, and still growing. In 2005, it represented:
  - 12% of manufacturing GDP
  - 168,000 of direct employment
  - 2.6 million vehicles of production
  - 17% of total NAFTA output
  - $110.5 billion in shipments (vehicles, parts)
  - 23 passenger/commercial assembly plants
  - Home to six global automakers: DaimlerChrysler, Ford, GM, Honda, Suzuki, Toyota
  - Supply base of more than 900 parts plants
- From 1995 to 2005 capital expenditures for the automotive industry averaged over $3.4 billion per year.

Light Vehicle Production and Sales in Canada
(in millions of units)

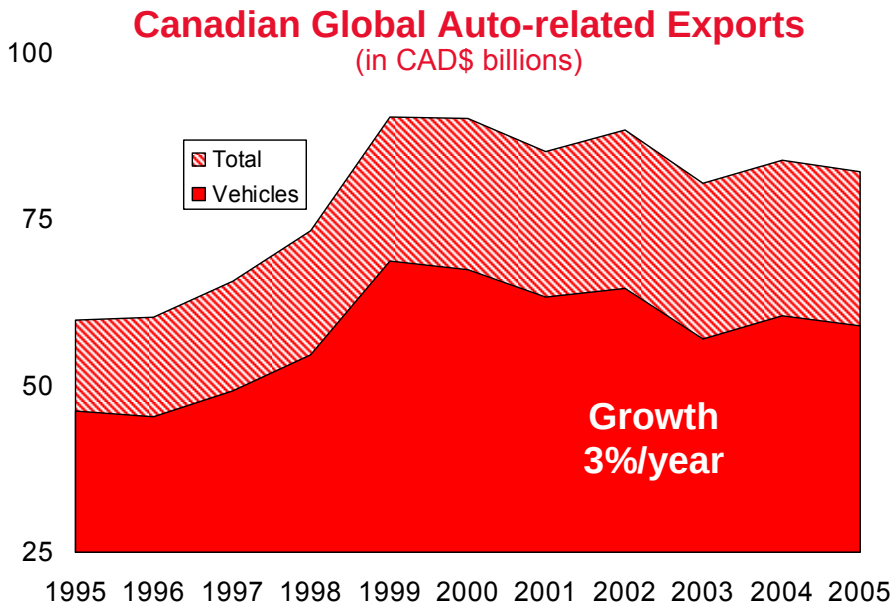


Source: Ward's Automotive

Canada

Export-Oriented Auto Industry

- Canada is the world's third largest exporter of automotive products, after Japan and U.S.
- 84% of Canadian-built vehicles are exported, primarily to the U.S.
- Canada-U.S. auto trade totals $137 billion, with a Canadian surplus of $22.3 billion.
- Export Development Canada (EDC) is available for export financing, insurance, capital expenditures.

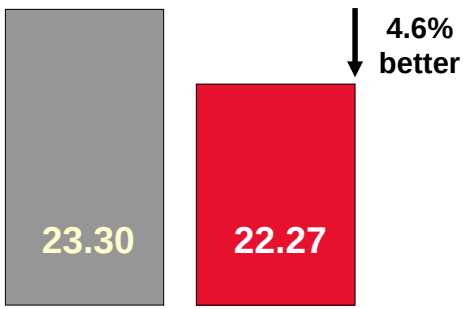


Source: Statistics Canada

Canada

Outstanding Productivity and Quality

Assembly Plant Productivity
(in hours per vehicle HPV)



Source: 2005 Harbour Report

- In hours per vehicle, Canadian assembly plants have a 4.6% overall advantage.
- In terms of productivity, Canadian assembly plants ranked:
  - first in North America overall – GM Oshawa #1
  - first in two segments – midsize and large cars
- Canadian assembly plants have won one-third (15) of all J.D. Power plant quality awards for North America, but are responsible for only one-sixth of regional production.
- A testament to quality:
  - GM Canada ranked no. 1 in plant quality for 2002, 2003 and 2005. Other winners included Honda, Ford and Toyota
  - Toyota's Canadian plant is the first outside Japan to produce a Lexus-brand vehicle
  - Honda's Canadian plant produces both the 2006 North American Car and Truck of the Year (Civic and Ridgeline)

Canada

Companies Continue to Invest

Recent Announcements: Vehicle Assembly		
Hino (Woodstock)	$3 million	New heavy truck assembly plant
Toyota (Woodstock)	$1.1 billion	New assembly plant for RAV4
DaimlerChrysler (Windsor/Brampton)	$768 million	Upgrade assembly and R&D operations
Navistar (Chatham/Windsor)	$270 million	Heavy truck design/assembly, diesel engine R&D
GM (Ontario operations)	$2.5 billion	Upgrade assembly, engine and R&D operations
Ford (Oakville)	$1.1 billion	Redevelopment of assembly complex
DaimlerChrysler (Windsor)	$400 million	Retooling for new Caravan
Motor Coach Industries (Winnipeg)	$40 million	Intercity bus production and engineering
Recent Announcements: Auto Parts		
Windsor Aluminum (Nemak – Mexico)	$100 million	New aluminum engine block casting technology
Toyoda Iron Works (Japan)	$50 million	Stamped metal and assembled parts plant
TransForm Automotive (U.S.)	$15 million USD	Transmission components plant
CAPTIN (Toyota – Japan)	$39 million	Expand aluminum wheel production
Veltri Metal (Flex-n-Gate – U.S.)	$50 million	Stamped metal parts plant
Brose Fahrzeugteile (Germany)	$81 million	Seat adjuster and door component plant
Windsor/Essex Engine (Ford)	$770 million	Upgrade to flexible manufacturing
Starlim Sterner (Austria)	$27 million	N.A. headquarters + injection-molding plant
FIO Automotive (Futaba – Japan)	$31 million	Parts plant to supply Lexus RX330

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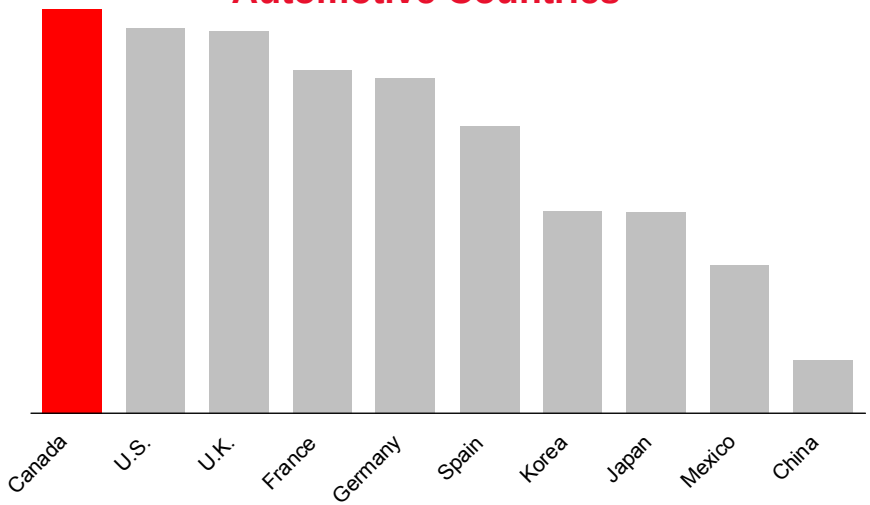
Canada

Top-Ranked Business Climate

- The EIU rates Canada's business environment as the best in the world.
- Stable, well-managed governments have created strong conditions for growth:
  - budget surplus
  - competitive tax regime
  - low inflation
  - low interest rates
  - liberal trade policy / market access
  - strong commitment to innovation
  - programs (training, R&D)
- Foreign investors have access to supportive governments at all levels.

World Rank -- Business Environment 2005-2009
Automotive Countries



Source: Economist Intelligence Unit, April 2005, assessment of 70 indicators of business friendliness, infrastructure and competition.

Canada

Part of an Integrated North American Market

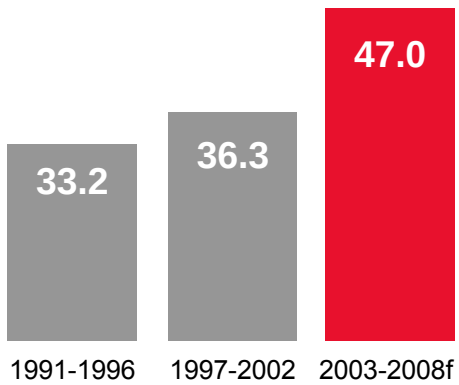
- The N.A. Free Trade Agreement integrates Canada into a market with annual sales of 20 million vehicles.
- No tariffs on OE parts imported into Canada (vs 2.5% tariff in the U.S.)
- Canada and the U.S. are actively expanding border capacity:
  - the “smart border” accord, FAST and NEXUS programs
  - $300 million over five years for Windsor-Detroit bridge, tunnel, road improvements on the Ontario side

Canada

North American Growth Creates Opportunity

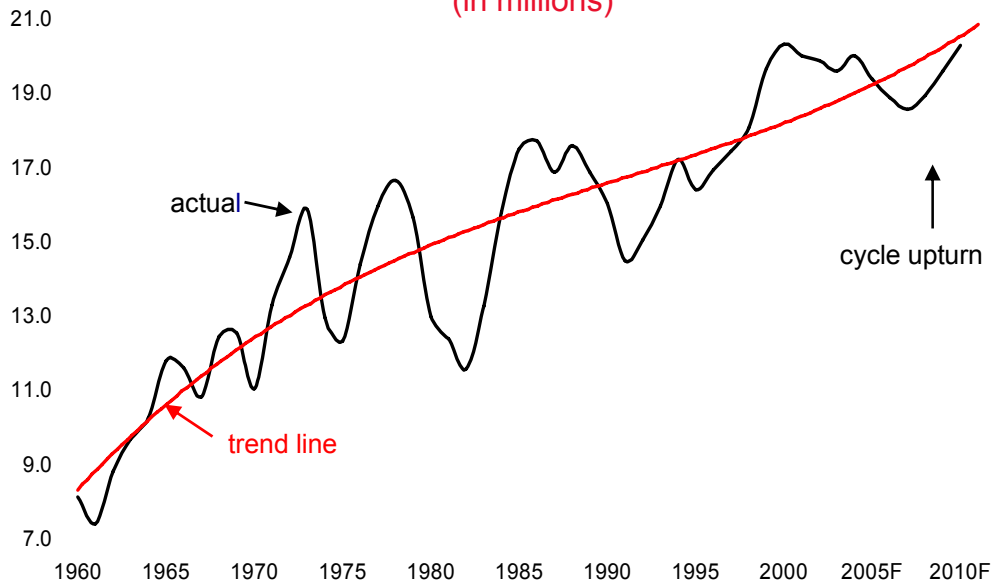
- N.A. automotive sales are forecast to grow 10% in the next decade.
- Assemblers are launching more new models in the next three years.

Model Launches per Year
(five-year averages)



Source: DesRosiers Automotive Consultants

North American Light Vehicle Sales
(in millions)



Source: DesRosiers Automotive Consultants

- This growth is encouraging automakers and parts manufacturers, to invest and expand production.
- Canada is an excellent N.A. location in which to establish, or expand.

Canada

World-Class Automotive Industry

Auto Assembly - 12 plants -	Auto Parts - 900+ plants -	Parts Product Lines
	Magna International	Stamping, interior/exterior systems, trim, powertrain components
	Waterville TG	Rubber weather stripping
	Denso Canada	Air conditioners
	Woodbridge Group	Molded foam, interior trim, seating
	ABCgroup	Plastics, blow and injection molded
	Lear Canada	Seating
	Dana Canada	Chassis components
	TRW Canada	Steering, suspension components
	Siemens	Electronic/electrical controls, manifolds, fuel modules
	F&P Mfg.	Stamped and hydroformed parts

CAMI Automotive Inc.
DaimlerChrysler
Ford
GM
Honda
Toyota

Magna International
Waterville TG
Denso
The Woodbridge Group
ABCgroup
Lear Corporation
Dana
TRW
Siemens
F&P

Canada

Well-Developed Infrastructure

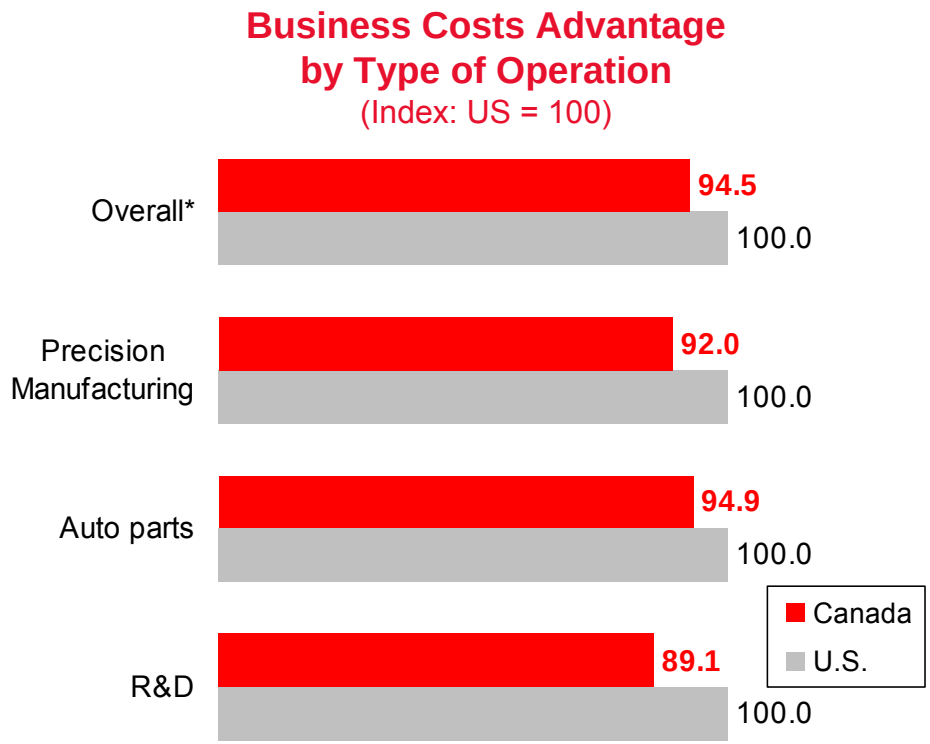
Canada's automotive infrastructure is linked with the U.S. market:

- Multiple border crossings
- Integrated transportation system linking suppliers and customers
  - 401 / I-75 corridor
  - road, rail, other
- World-class telecommunications and wireless

Canada

Globally Cost Competitive for Automotive

- Independent benchmarking study shows that Canada has a 5% auto parts manufacturing cost advantage over the U.S. and an 11% advantage for R&D.
- Companies in Canada have specific advantages in:
  - labour and benefits;
  - transportation and utilities; and
  - corporate income tax rates.



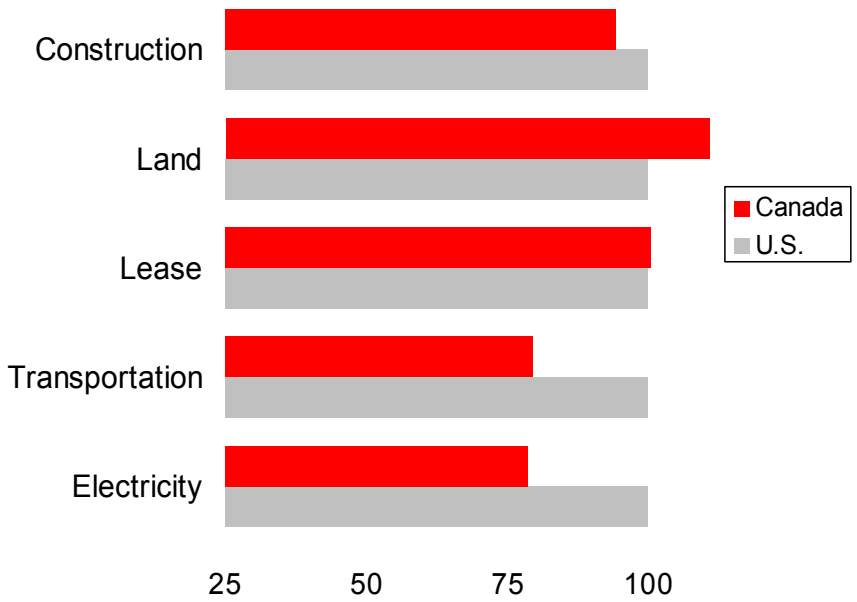
Source: KPMG, Competitive Alternatives 2006 Edition
- Overall rank covers business operations over 12 industries
- Index based on after-tax cost of startup and operation over 10 years.

Canada

Lower Capital and Operating Expenses

- When compared to the U.S.:
  - construction costs are 6% lower in Canada;
  - land and office lease costs are comparable;
  - transportation costs are 21% lower for manufacturing industries; and,
  - electricity costs are 21% less for industrial users.

Comparison of Selected Business Costs*
(Index: US = 100)



Source: KPMG, Competitive Alternatives 2006 Edition
* For more see www.CompetitiveAlternatives.com

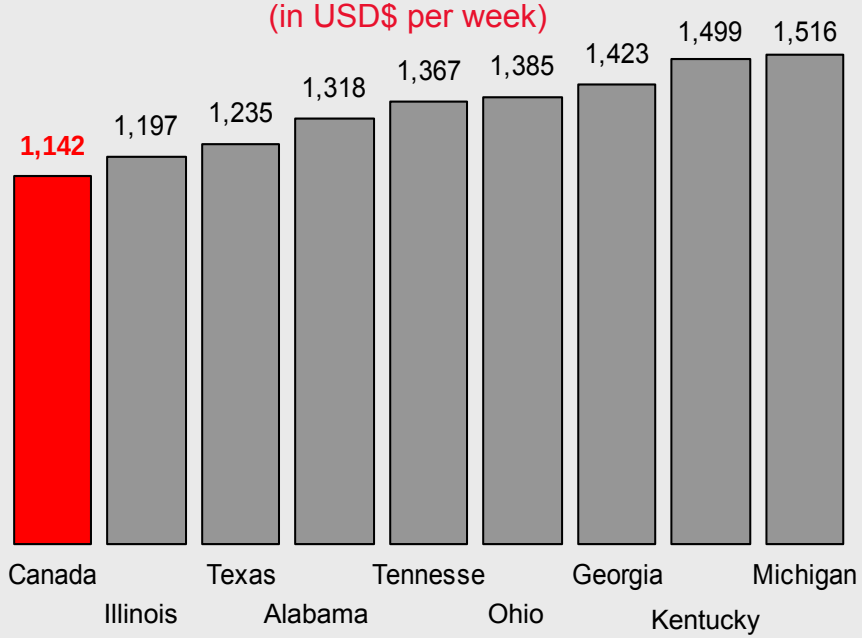
Canada

Labour Savings are Substantial

When compared to the U.S. …

- Wages are generally lower.

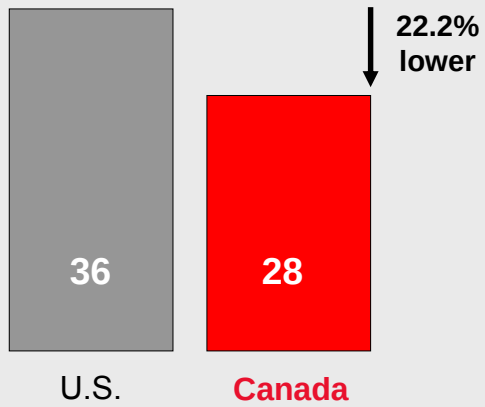
Motor Vehicle Manufacturing, 2004
(in USD$ per week)



Sources: Statistics Canada and U.S. Bureau of Labor Statistics (NAICS 3361)
Based on exchange rate: CAD$1.00 = USD$0.85

- Benefits are lower, due largely to government-funded health care.

Statutory and Employer-Sponsored Benefits
(% of wages)

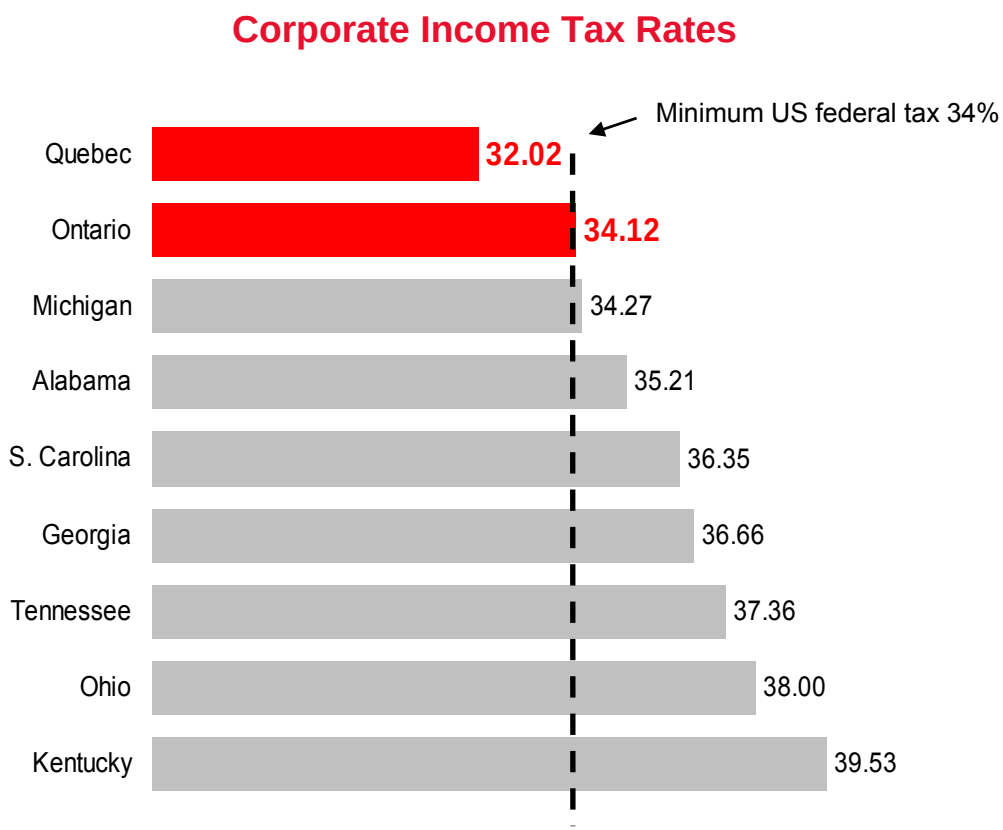


Source: KPMG, Competitive Alternatives 2006 Edition (average of 12 operations included in overall results)

Canada

Lower Corporate Income Taxes

- *Combined* federal-provincial taxes are lower than the minimum U.S. federal rate of 34%.
- 2003 federal and provincial budgets called for the elimination of capital taxes by 2008
- By 2006, Canada is expected to have a 5.1% corporate tax advantage over the U.S., including capital taxes.



Source: KPMG, Competitive Alternatives 2006 Edition – combined manufacturing tax rates

Canada

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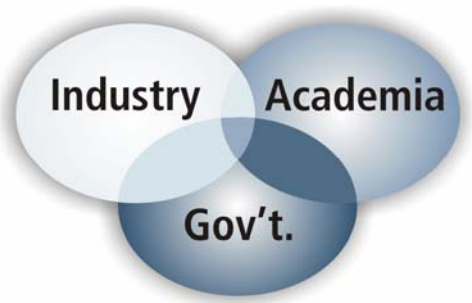
Investing in Research and Innovation

Research and Innovation is a Federal Priority:

- National strategy to make Canada a global leader in the knowledge economy
- Goal is to have Canada among top five countries for R&D
- Investing in skills / highly qualified personnel
- 2003 federal budget added $1.7 billion in spending over three years
- In building a technology-enabled, knowledge-based economy, Canada has invested $13 billion in research since 1997
- Provinces play a strong role in funding programs for innovation
- In partnership with industry and academia

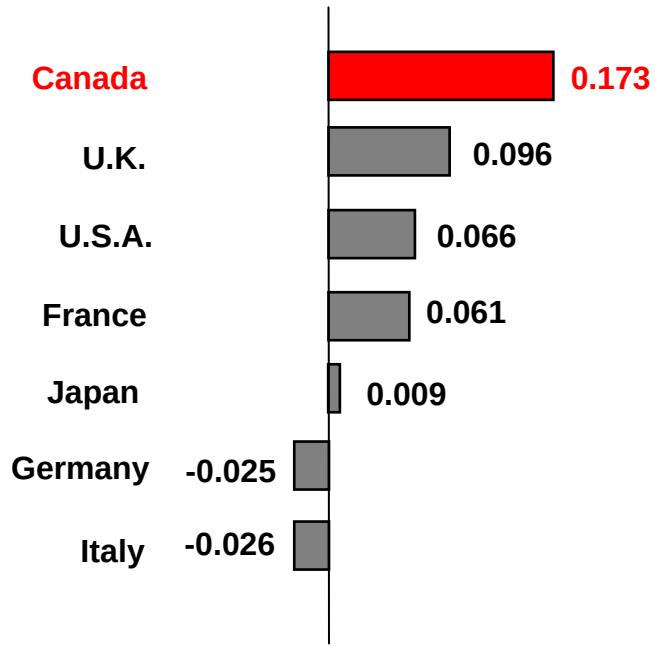


Canada

Programs Support Innovation and R&D

- The most generous tax treatment for R&D, in the G-7 (SR&ED program).
- Other government R&D support programs to assist commercializing technology:
  - Technology Partnerships Canada
  - Canadian Foundation for Innovation
  - Canada Research Chairs
  - Industrial Research Assistance Program
  - Natural Sciences and Engineering Research Council (NSERC)
  - plus provincially-based programs

Rate of Tax Benefit for USD$1 of R&D



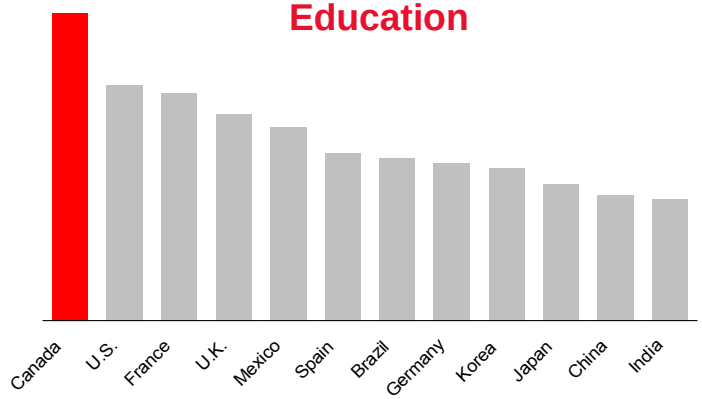
For example: in Canada, one unit of R&D expenditure for large firms, results in 0.173 of tax relief.
Note: negative results possible due to high statutory corporate tax rates.
Source: OECD, STI Division, May 2003

Canada

Skilled and Educated Workforce

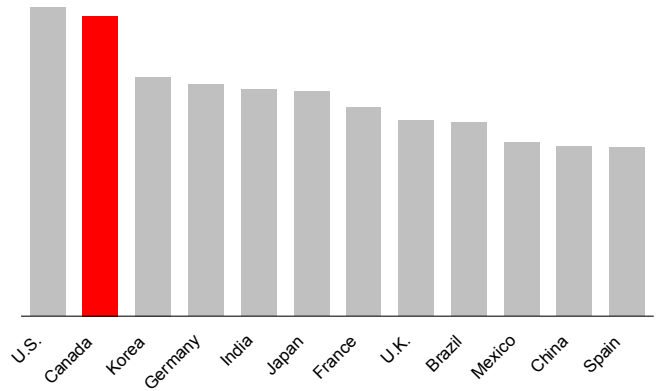
- Canada is ranked tops, when it comes to education:
  - 1st in the world for percentage of population achieving a tertiary education - 51%
  - spent more on public education, as a percentage of GDP, than any other country
  - knowledge transfer and commercialization, between companies and universities
  - 10 Canadian electrical engineering programs in the top 22; and 18 in the top 40, in N.A. (U.S. Gourman Report)
  - 4th among 59 countries, based on availability of management education in first-class business schools.

Total Public Expenditure on Education



Source: IMD, World Competitiveness Yearbook 2005

Knowledge Transfer System



Source: IMD, World Competitiveness Yearbook 2005

Canada

Core Strengths in Auto-related Innovation

Metal Processing

- Advanced casting of light metals
- Cutting and machining
- Sheet and tube forming
- Welding and joining
- Powder metallurgy

Advanced Materials

- Lightweight materials
- Nano-materials

Advanced Design, Visualization and Manufacturing

- Inspection and vision systems
- Laser imaging
- Tooling and robotics
- Stereo-lithography, laser deposition
- Virtual design

Information and Communications Technology

- Software engineering
- Navigation and positioning
- Wireless technologies and networks
- Microchip design, system-on-chip, engineering
- Semi-conductor technologies (MEMS, RF)
- Telematics, communications
- Micromachining
- Intelligent systems
- Photonics and optoelectronics
- Nanotechnology
- Enhanced synthetic vision

Advanced Technologies

- Mechatronics
- Powertrain engineering
- Clean diesels
- Homogenous charge compression ignition
- Fuel cells, hydrogen and alternative fuels

R&D Infrastructure Levers Technology and Talent

Some examples…

- **Canadian Lightweight Materials Research Initiative: www.climri.nrcan.gc.ca**
- **Centre for Automotive Materials and Manufacturing: www.camm.queensu.ca**
- **Transportation Development Centre: www.tc.gc.ca/tdc**
- **AUTO21 Network of Centres of Excellence: www.auto21.ca**
- **CANMET laboratories: www.nrcan.gc.ca**
- **NRC National Research Council auto-related programs: www.nrc.ca**
  - Industrial Manufacturing Technology Institute
  - Industrial Materials Institute
  - Natural Sciences and Engineering Research Council (NSERC)
  - Communications Research Canada

Canada

Summary: Excellent Conditions for Growth

Canada is an ideal place for automakers and parts manufacturers to:

- Serve the North American market
- Expand production in the region
- Reduce costs / add value / produce quality
- Conduct R&D / technological innovation

Canada's automotive advantages include:

- Highly developed / integrated automotive environment
- Excellent business climate and well-developed infrastructure
- Availability of skilled and educated labor
- Globally competitive costs, productivity and quality
- Technology / R&D support

Business expansion opportunities in Canada:

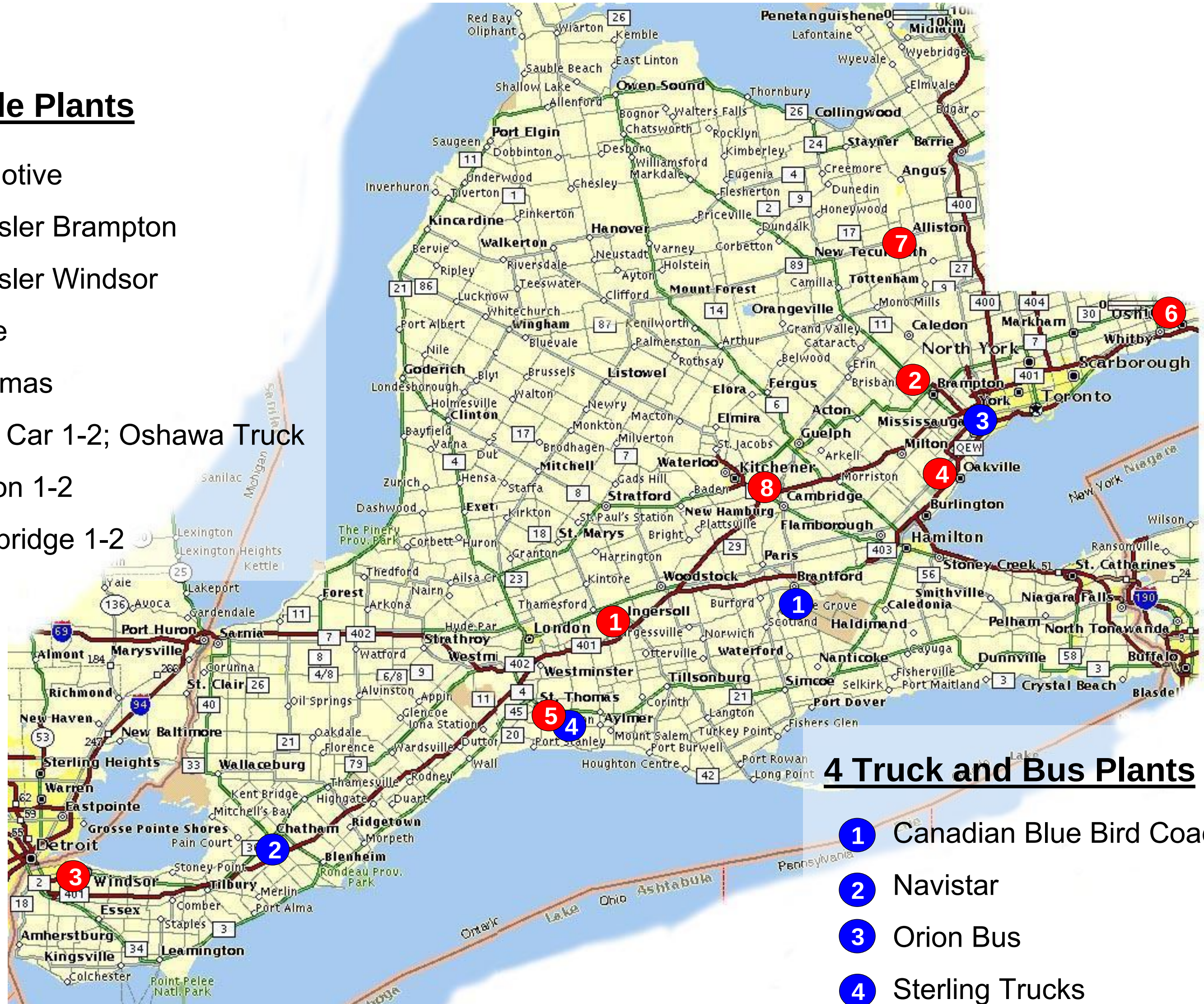
- Procurement of quality parts and materials
- Vehicle assembly / production mandates
- Auto parts manufacturing
- Research and development

Canada

Annex: Vehicle Assembly Plants in Ontario

12 Light Vehicle Plants

1. CAMI Automotive
2. DaimlerChrysler Brampton
3. DaimlerChrysler Windsor
4. Ford Oakville
5. Ford St. Thomas
6. GM Oshawa Car 1-2; Oshawa Truck
7. Honda Alliston 1-2
8. Toyota Cambridge 1-2



4 Truck and Bus Plants

1. Canadian Blue Bird Coach
2. Navistar
3. Orion Bus
4. Sterling Trucks

Canada

Annex: Investment Opportunities

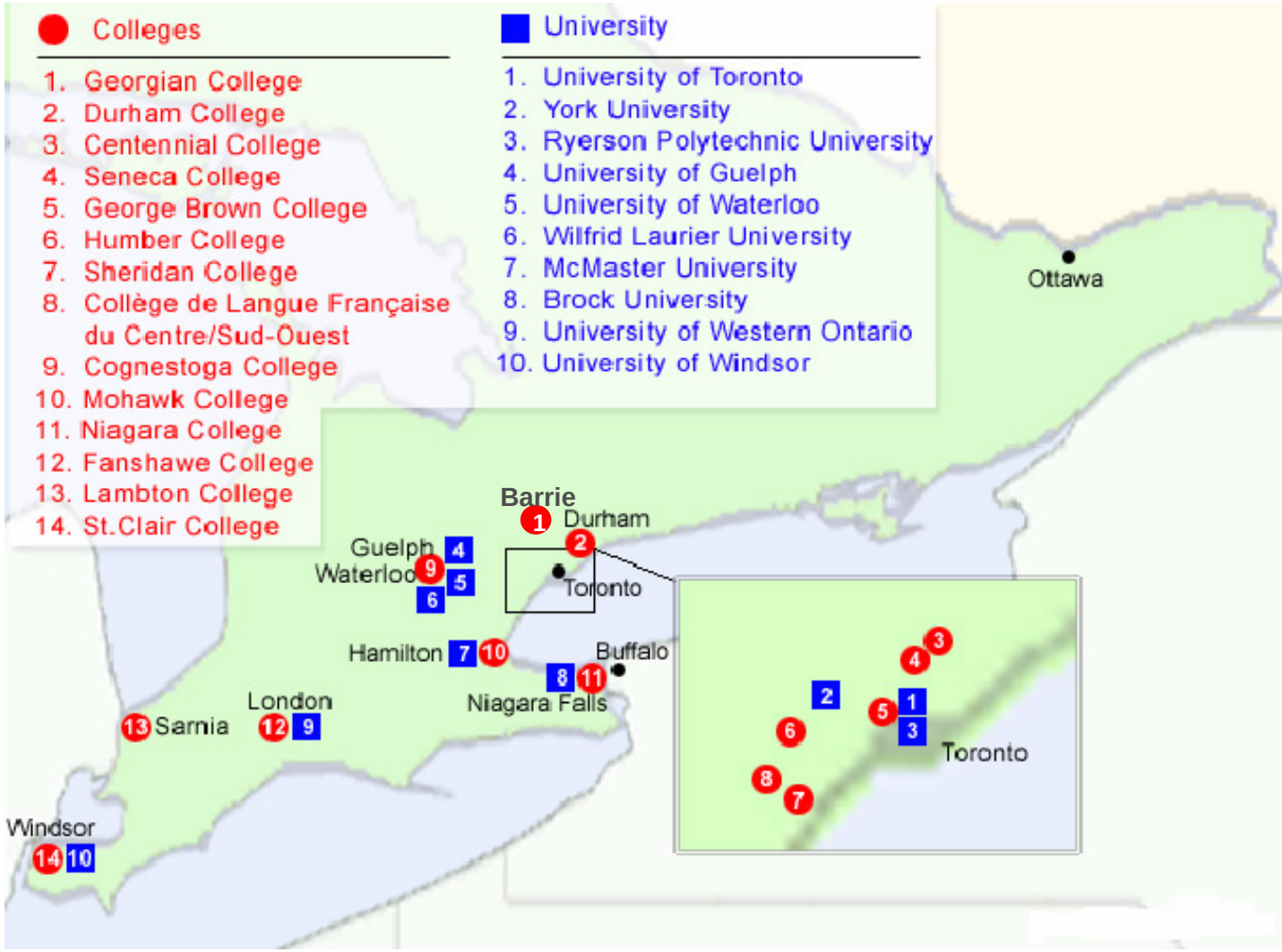
- Canada's strengths include:
  - tool, die and mold (TDM)
  - materials (plastics, light metals)
  - OE parts (stamping, injection/blow molding)
  - vehicle assembly
  - engineering
- Business Opportunities in Canada for:
  - systems integrators (Tier 1 and 2)
  - automotive electronics
  - drivetrain components
  - steering systems
  - HVAC

Capabilities and Opportunities

USD$ value per vehicle		
Interior	$1,200	Strong
Wheels + tires	$300	Strong
Body + structure	$1,850	Mid-to-strong
Exhaust	$200	Mid-to-strong
Engine	$1,800	Mid
Suspension	$400	Mid
Braking	$325	Mid
Passenger restraint	$300	Mid
Body glass	$200	Mid
Drivetrain	$1,600	Opportunity
Electrical + electronics	$1,500	Opportunity
Steering	$1,375	Opportunity
Climate control	$650	Opportunity
Fuel systems	$300	Opportunity

Source: DesRosiers Automotive Consultants

Annex: Automotive Education in Ontario



Canada

Annex: Export Financing Solutions

An Experienced EDC Automotive Team

- More than $3 billion in automotive financing in past three years
- Many innovative automotive financing solutions, including tooling procurement, tooling amortization, CAPEX, project financing, syndications and club deals
- Competitive rates and fees
- Can structure financing for entire automotive supply chain
- Extensive experience supporting auto parts companies investing in Canada

Introductory Services

- Excellent relationships with banking sector, useful for introducing new companies and/or structuring multi-bank credit facilities
- Extensive network of world-class tool, die, mold, press and assembly equipment suppliers in Canada

EDC
Export Development Canada
Exportation et développement Canada

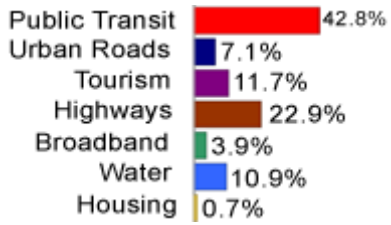
Canada

Annex: Comparison of R&D Tax Credits

	CANADA	UNITED STATES
Eligible Cost	✓ Total cost of contracted R&D eligible, when contract is at arm's length.	× Only 65% of R&D costs eligible.
	✓ Capital equipment, overhead, process R&D, salaries, and materials.	× Only salaries and materials.
	✓ Equipment costs qualify.	× Equipment costs do not qualify.
	✓ Canada's R&D tax credits do not require incrementality. Also, investment tax credits earned may be used to offset taxes payable.	× Only year-over-year incremental costs are eligible.
	✓ Research funded by non-residents qualifies.	× Research funded by non-residents does not qualify.
	✓ Option to claim tax credits on proxy.	× No option for using proxy amount
Deferral of claim	✓ Without limit.	× Restricted.
	✓ Offers landed immigrant status to specialists involved in R&D, resulting in faster formation of international R&D teams; also spouses are permitted to work.	× Neither is the case.

Annex: Infrastructure Canada Programs

- **Canada Strategic Infrastructure Fund ($4 billon):**
  - transportation of people and goods
  - emissions reduction
  - more effective urban development
  - increased economic activity
  - use of innovative technologies in green house emissions
  - 50% contribution of eligible costs, minimum $75 M (ON and PQ)



- **Municipal Rural Infrastructure Program ($1 billion):**
  - improve/increase core public infrastructure (water, wastewater, cultural, recreation)
  - improve quality of life, economic opportunities (smaller communities, First Nations)
  - partnership between three levels of government
  - 60% funding, cost-shared

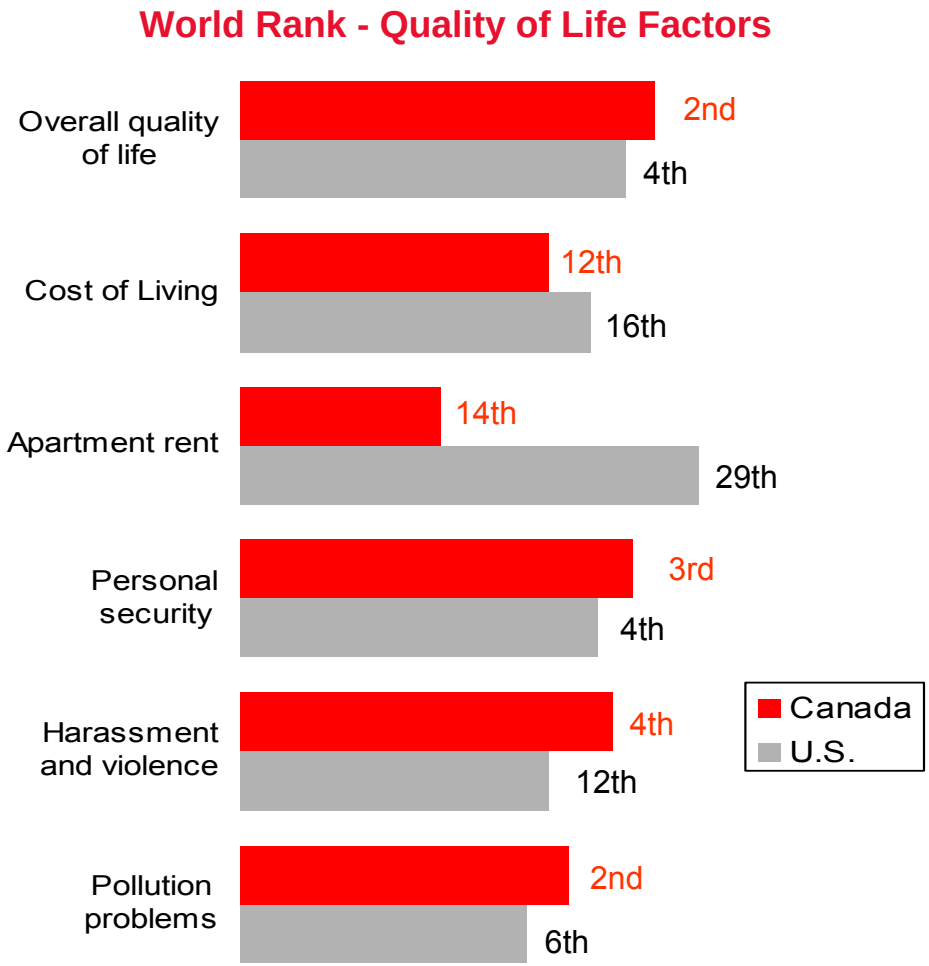
Canada-Ontario Municipal Rural Infrastructure Fund
Fonds sur l'infrastructure municipale rurale Canada-Ontario
Infrastructure

- **Border Infrastructure Fund ($600 million):**
  - improve efficiency of border crossings
  - federal/provincial/private sector agreements
  - 50% contribution of eligible costs

Canada

Annex: Canada is a Great Place to Live

- Among major auto producing nations, Canada:
  - has the highest quality of life;
  - has the second lowest cost of living and the lowest apartment rents;
  - is among the safest places to live and do business; and
  - is among the least afflicted by pollution.
- Other Canadian advantages include:
  - high-quality, low-cost education;
  - universal health care;
  - cosmopolitan cities; and
  - diverse cultural and recreational amenities.



Source: IMD, World Competitiveness Yearbook 2005

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